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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,278	06/23/2000	RICHARD ARTHUR LINDSAY	1123/29	1383

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EXAMINER

SELBY, GEVELL V

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/582,278

Applicant(s)

LINDSAY, RICHARD ARTHUR

Examiner

Gevell Selby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/23/00 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5, 3
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should

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be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

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- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

2. The disclosure is objected to because of the following informalities: it does not follow the preferred guidelines.

3. This application does not contain an abstract of the disclosure as required by 37

CFR 1.72(b). An abstract on a separate sheet is required.

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Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798.**

In regard to claim 1, Lindsay, US 5,697,757 discloses a camera mounting for a TV/video camera (see figure 1), comprising:

a base (11),

a counter-balanced arm assembly (10) pivotally mounted on the base (11) at one end thereof to swivel about a vertical axis (20) and having a platform (32) for carrying a camera at the other end thereof,

the arm assembly having relatively movable components (24 to 28) to permit, with said swiveling of the assembly about said vertical axis,

movement of the platform in three orthogonal axes characterized in that the base (11) of the mounting has a datum point.

The Lindsay reference fails to teach the mounting has three separate transducer means for determining swivel movement of the arm about said vertical

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axis and relative movement between said arm components in a plane containing said vertical axis, and

monitoring means are provided for determining, from the movements detected by said transducers, the position of the camera platform with respect to the datum point in said three axes to provide information regarding the location of the camera for purposes such as controlling movement of a virtual reality image to be combined with a real image as seen by the camera as the camera is moved with respect to the datum.

Trumbull et al., US 3,902,798, discloses a camera mounting for movement of the camera in three orthogonal axes by wheels (see figure 15, elements 375, 381, 382, and 383) of a carriage, a pivot arm (see figure 14, element 45) about a horizontal axis and a camera-platform (see figure 14 and 18, element 48) which pivots about a vertical and horizontal axis. Each movement is surveyed by a surveyed by a separate sensor (see figure 17, element 396, figure 16, element 388, figure 14, element 393, figure 21, element 435, figure 18, element 420 and column 10, lines 40 to column 11, lines 47) to determine with the aid of a computer (see figure 1, element 56 and the position of the camera (see column 4, lines 52-60) with respect to a reference point (nodal point; see column 13, lines 59-67). This movement is reproduced by the mounting of the background camera (see column 1, lines 48-53) and allows for the combining of the two images to make a virtual image (see column 1, lines 5-10).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Lindsay, US 5,697,757, in view of Trumbull

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et al., US 3,902,798, to have the mounting having three separate transducer means and the monitoring means as claimed in claim 1 in order to couple the movement of the foreground and background cameras relative to their respective frames of reference whereby to maintain their respective viewed scenes in substantially equal perspective as taught by Trumbull.

In regard to claim 2, Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as described in regard to claim 1, discloses a camera mounting as claimed in claim 1, wherein the arm assembly (see Lindsay: figure 1, element 10) is mounted on the base (see Lindsay: figure 1, element 11) for rotation about a vertical axis (see Lindsay: figure 1, element 20) through the datum point, the arm assembly providing movement of the camera platform in two orthogonal axes in any plane containing said vertical axis (see Lindsay: figure 11, elements x and y). It would have been obvious to one of ordinary skill in the art that a pan or azimuth potentiometer (420) of the Trumbull reference can be used as the transducer means comprising first transducer means for determining rotation of the arm about said vertical axis as well as for a further transducer means for determining movement of the camera platform in said plane with respect to the datum point in order to couple the movement of the foreground and background cameras relative to their respective frames of reference whereby to maintain their respective viewed scenes in substantially equal perspective as taught by Trumbull.

In regard to claim 3, Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as described in regard to claim 1, discloses a camera mounting as claimed in claim 2, wherein the arm assembly (see Lindsay: figure 1, element 10) is telescopic (see

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Lindsay: figures 1 and 2) and is mounted on the base (see Lindsay: figure 1, element 11) to pivot in a vertical plane about a horizontal axis (29; see column 3, lines 64-67).

In regard to claim 5, Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as described in regard to claim 1, discloses a camera mounting as claimed in claim 2 wherein the arm assembly (see Lindsay: figure 1, element 10) has a control point (see Lindsay: figure 1, element 39) connected to the arm assembly so that movement of the control point with respect to the datum point in the vertical plane containing the arm and said vertical axis is directly proportional to the movement of the camera platform (see Lindsay: column 6, lines 11-19). It would have been obvious to one of ordinary skill in the art that a potentiometer (393) of the Trumbull reference can be used as the transducer means at point (29) arranged to monitor movement of the control point with respect to the datum point by measuring the angular movement of the arm to which the control point is connected.

In regard to claim 6, Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as described in regard to claim 1, discloses a camera mounting as claimed in claim 5, wherein the transducer means for monitoring movement of the control point (29) comprise separate transducers for responding to movement of the control point with respect to the datum point in vertical and horizontal directions.

The potentiometer (393) of the Trumbull reference would monitor the vertical movement while the pan or azimuth potentiometer (420) monitors the horizontal movement.

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In regard to claim 7, Lindsay, US 5,697,757, discloses a camera mounting as claimed in claim 3, but does not disclose the further transducer means are arranged to monitor extension of the arm and pivotal movement of the arm about said horizontal axis to monitor the position of the camera platform in a vertical plane with respect to said datum.

The Trumbull reference, however, does teach to provide at each axis of movement a separate sensor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as described in regard to claim 3, to have a transducer means to monitor the extension of the arm and its pivotal movements in order to couple the movement of the foreground and background cameras relative to their respective frames of reference whereby to maintain their respective viewed scenes in substantially equal perspective as taught by Trumbull.

6. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as applied to claim 1 above, and further in view of Lindsay, US 4,657,220.

In regard to claim 4, Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as applied to claim 2 above, discloses a camera mounting as claimed in claim 2. Lindsay and Trumbull do not disclose wherein the arm assembly comprises a first arm pivotally mounted on the base about a horizontal axis and a second arm pivotally mounted on the first arm about a parallel horizontal axis for supporting the camera platform.

Lindsay, US 4,657,220, discloses camera mounting equipment comprising a wheeled base (see figure 1, element 1) with a first arm (see figure 1, element 20) pivotally mounted to it and a second arm (see figure 1, element 23) pivotally mounted to the first about a parallel horizontal axis for supporting the camera platform (see figure 1, element 18).

It would have been an obvious to one of ordinary skill in the art to have been motivated to modify the Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as applied to claim 2 above, in further view of Lindsay, US 4,657,220, to have two arm assemblies pivotally attached to one and another and the base in order for the motion to be constrained to limited planes or directions in addition to vertical guidance as taught by Lindsay, US 4,657,220 (see column 1, lines 56-61).

In regard to claim 8, Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, as applied to claim 4 above, discloses a camera mounting as claimed in claim 4.

Lindsay, US 5,697, 757, and Trumbull et al., US 3,902,798, do not disclose that further transducer means are arranged to monitor pivotal movement of the first arm about said horizontal axis with respect to the base and pivotal movement of the second are with respect to the first arm to monitor the position of the camera platform with respect to said datum.

It would have been obvious to one of ordinary skill in the art to have been motivated to modify Lindsay, US 5,697,757, in view of Trumbull et al., US 3,902,798, in further view of Lindsay, US 4,657,220, as described in regard to claim 4, to have the pan

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or azimuth potentiometer (420) of the Trumbull reference as the transducer means comprising first transducer means for determining rotation of the first arm about said horizontal axis as well as for a further transducer means for determining movement of the second arm with respect to the first arm to monitor the position of the camera platform with respect to the datum point in order to couple the movement of the foreground and background cameras relative to their respective frames of reference whereby to maintain their respective viewed scenes in substantially equal perspective as taught by Trumbull.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art discloses camera mounts with a telescoping arm or arm with elbow joint:

US 4,907,768,

US 4,247,067,

US 4,160,536,

US 5,457,370.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Ngoc-Yen Vu can be reached on 703-305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



NGOC-YEN VU
PRIMARY EXAMINER